



COUNTY COUNCIL OF NORTHUMBERLAND.

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# ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

for the Year 1919.

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NEWCASTLE-UPON-TYNE :

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NORTHUMBERLAND COUNTY COUNCIL.

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REPORT OF THE COUNTY MEDICAL OFFICER OF HEALTH  
FOR THE YEAR ENDING 31ST DECEMBER, 1919.

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TO THE CHAIRMAN AND MEMBERS OF THE COUNTY COUNCIL  
OF NORTHUMBERLAND.

MR. CHAIRMAN, MY LORDS, LADIES AND GENTLEMEN,

The accompanying report, like that for the preceding year, is presented in a somewhat abridged form and, in addition to the statistics for the administrative county, deals with the annual reports received from district medical officers of health under the heads of the public health subjects commented upon.

*Reports of District Medical Officers of Health.*—Only three were received during the first quarter of the year, 15 during the second quarter, 12 during the third quarter and two subsequently; one report (that relating to the borough of Berwick-on-Tweed) had not been received at the end of 1920. The dates at which the reports were received during 1920 were as follows:—River Blyth Port, March 26th; Whitley and Monkseaton urban and Hexham rural, March 27th; Rothbury urban, April 9th; Prudhoe, April 10th; Norham and Islandshires, April 24th; Morpeth borough, April 26th; Rothbury rural, April 29th; Cramlington, May 4th; Castle Ward, May 7th; Longbenton and Glendale, May 15th; Gosforth, May 27th; Seaton Delaval, June 8th; Newburn, June 14th; Belford, June 15th; Earsdon, June 25th; Bedlington, June 30th; Seghill, July 1st; Blyth and Bellingham, July 7th; River Tyne Port, July 8th; Alnwick urban, July 15th; Morpeth rural, July 31st; Amble, August 11th; Wallsend borough, August 20th; Alnwick rural, August 21st; Ashington, August 23rd; Weetsiade, September 27th; Hexham urban, September 29th; Newbiggin, October 19th; Haltwhistle, November 5th; the report for Berwick-on-Tweed was not received until February 24th, 1921.

*Administrative changes.*—Norham and Islandshires Rural District—Dr. J. McWhir succeeded Dr. P. A. Dewar Head, resigned.

In each of the following districts the Medical Officer of Health, who had been absent on war service, resumed his duties, replacing the gentleman who had been acting as his deputy, viz. :—

Amble Urban District—Dr. J. A. Loughridge succeeded Dr. Welsh.

Cramlington „ —Dr. J. Anderson succeeded Dr. Forsyth.

Hexham Rural District—Dr. J. Steedman succeeded Dr. Boustead.

In the department of the County Medical Officer, Miss J. McCreath was appointed as an additional Tuberculosis Health Visitor and Miss R. Grigor was appointed to fill a vacancy among Health Visitors under the Notification of Births Acts. Under the scheme for amalgamating the work of the School Nursing Service with that of the Health Visitors under the Notification of Births Acts six additional Health Visitors were appointed, viz. :—Miss C. P. Phillips, Miss L. Smith, Miss A. E. H. Curry, Miss A. F. Murphy, Miss A. Robb and Mrs. H. Chester. Four clerks, serving with the forces, one in the navy and three in the army, were released during the year and resumed their work in the department.

*Vital Statistics.*—The birth rate (22·14) though lower than the mean for the past ten years, was higher than the rate for the preceding year and than that for England and Wales.

The net death rate (14·11) was distinctly lower than that for the preceding year and slightly lower than the mean for the ten years 1910-1919 and than the rate for England and Wales.

The infant mortality rate (102 per 1,000 births) though slightly higher than during the previous year was lower than that for England and Wales and than the mean rate in the administrative county for the ten years 1910-1919.

The death rate from the principal zymotic diseases (0·92) though higher than that for England and Wales was distinctly lower than the rate for the preceding year. The deaths from Diarrhœa and Enteritis (under 2 years) were identical in number (114) with those for 1918.

#### SANITARY LEGISLATION.

##### *Acts.*

*Ministry of Health Act, 1919.*—This Act provided for the establishment of a Ministry of Health; a Minister of Health was appointed, and to the Ministry were transferred (*a*) all the powers and duties of the Local Government Board and the Insurance Commissioners, (*b*) the powers and duties of the Board of Education as regards medical inspection of school children and attending to the health of expectant mothers and children under five years of age, (*c*) the powers of the Privy Council under the Midwives Acts of 1902 and 1918, and (*d*) such powers of supervising the administration of Part I. of the Children Act, 1908 (relating to infant life protection) as were previously exercised by the Home Office.

Provision was also made for transference to the Ministry of Health “from time to time by Order in Council of (1) all or any of the powers and duties of the Home Secretary relating to lunacy and mental deficiency, and (2) any other powers of any Government department relating to the health of the people.”

The establishment of consultative councils by Orders in Council was also provided for in connection with matters affecting or incidental to the health of the people, such councils to include women as well as men.

*Anthrax Prevention Act, 1919.*—In this Act provision was made for prohibiting the importation of goods infected with anthrax and for the provision at seaports, etc., of suitable disinfecting apparatus for dealing with infected goods.

*Housing, Town Planning, &c., Act, 1919.*—No Act of recent years, dealing with sanitary administration, has been passed which confers upon local authorities greater powers and obligations than this measure, the object in view being tersely expressed by the Ministry of Health as (1) to make good in the shortest possible time the existing scarcity of houses, and (2) to raise the general standard of housing throughout the country.



The obligation was imposed on every sanitary authorities of making an immediate housing survey of their respective districts, of preparing and submitting to the Ministry of Health a scheme for dealing effectively with any shortage of housing accommodation as well as existing insanitary areas or individually defective houses. Provision was made for dealing with local authorities which failed to fulfil their obligations and the transference of the housing powers of such powers to county councils or the Ministry of Health, the expenses incurred being recoverable from the defaulting local authorities.

A further important obligation was placed on urban authorities with a census population of over 20,000, of preparing a town planning scheme within three years of the 1st of January, 1923, and the county council may be empowered by the Ministry to act in the place and at the expense of a defaulting authority. The procedure necessary in the preparation of such schemes was amended and simplified.

County councils were given power to provide housing accommodation for persons in their employment and to acquire land for that purpose, a grant of 30 per cent. (since extended to 50 per cent. until 1927) of the annual loan charges being provided for, the maximum period for such loans being extended to eighty years.

The financial cost of carrying out approved housing or reconstruction schemes by sanitary authorities was limited to a rate of one penny in the pound, any loss on such schemes above that amount being met by grants from the Treasury, except in the event of a scheme being carried out by the county council or Ministry in default of a local authority.

The new provisions for the acquisition of land for housing purposes very considerably increased the powers of both local and county authorities, right of entry being given after 14 days' notice when the Order authorising compulsory purchase had been received.

Power was given to local authorities to acquire estates or houses suitable for the working classes and to *alter, enlarge, repair and improve* such houses, and furthermore to sell or lease houses which had been erected by them under Part III. schemes, but houses may not be sold upon terms which would enable them to become "*tied*" houses.

The powers of local authorities for dealing with houses not "in all respects reasonably fit for habitation" were considerably extended and improved by Section 28 of the Act but the real value of this section will only be secured if the local authorities, in whose districts such houses exist, adopt a systematic policy of housing improvement and set up a reasonable standard of fitness. Provision was also made by which a local authority could raise money by borrowing (as in the case of housing schemes under Part III. of the 1890 Act) and lend such money to owners of defective property for improving the same, such loan not to exceed one half the estimated value of the property.

A penalty of (not exceeding) £20 was provided against owners or occupiers of houses who "let" or "occupy" respectively houses in respect of which a closing order is in force.

An important obligation on the part of landlords or their agents was the entirely new provision that the name and address of the medical officer of health for the district should be inserted in the rent book of all working class houses.

The Small Dwellings Acquisition Act, 1899, was amended in certain important details extending the provision of this Act so as to deal with houses up to £800 value in place of £400 as formerly.

Various amendments as to procedure in administration of former Housing Acts were provided, many of which will prove of extreme value in housing administration generally.

*Housing (Additional Powers) Act, 1919.*—This Act makes further provision more particularly as regards housing finance and allows grants to be made to private individuals or “bodies of persons” constructing houses within a certain period and up to a certain aggregate amount.

The grants to county councils providing houses for their employees were increased from 30 per cent. of the annual loan charges to 50 per cent. until March, 1927, and similarly increased grants were provided for public utility societies and housing trusts.

Provision was also made for prohibiting the demolition of houses which were reasonably fit (or could without reconstruction be made fit) for human habitation, and local authorities were given powers to prevent building operations, other than housing, in areas where there was a deficiency of labour or materials for building.

County councils were given powers to borrow money or to issue local housing bonds and to lend money to local authorities in their respective areas for housing purposes, subject to the sanction of the Ministry of Health.

*Rats and Mice (Destruction) Act, 1919.*—This Act provides penalties which may be recovered from *the occupier* of land or the master of a ship or other vessel who fails to take the necessary and reasonably practicable steps for the destruction of rats or mice on such land or vessel.

The local authorities under obligation to administer the Act were, in the provinces, the county councils and port sanitary authorities and, in case of default by such authorities, the Board of Agriculture. These powers may, however, be delegated.

#### *Orders and Regulations.*

*The Public Health (Pneumonia, Malaria, Dysentery, &c.) Regulations, 1919.*—These came into operation on March 1st, 1919, and place upon medical practitioners the statutory duty of notifying to local medical officers of health all cases of Malaria, Dysentery, Trench Fever, Acute Primary Pneumonia, Acute Influenzal Pneumonia occurring in their practice.

Various important administrative obligations were placed on medical officers of health in relation to cases notified, including notification to the Ministry of Health of cases of Trench Fever, Malaria or Dysentery; provision was also made for medical assistance, isolation in hospital, dealing with contacts or carriers by excluding from school attendance and for preventing such persons from being employed in the preparation or handling of food or drink for human consumption and the latter mentioned provisions were extended so as to apply to “carriers” of enteric fever infection.

*Public Health (Tuberculosis—Revocation of Temporary Regulations) Order.*—This Order issued on March 13th, 1919, revoked the Temporary Regulations of 1918, relating to the notification to the military authorities of persons affected with Tuberculosis who were of military age.

*Public Health (Cerebro-Spinal Fever) Regulations, 1919.*—These came into force on June 16th, 1919, and authority was given to county councils for providing and arranging for examination and treatment of persons suffering or suspected to be suffering from Cerebro-Spinal Fever as well as “contacts.” Authority was also given to county councils to provide serum and vaccine for the treatment of cases or suspected cases together with the necessary apparatus for such treatment. The Order also rescinded the previous Regulations issued in 1918.

*Board of Education (Health Visitors Training) Regulations, 1919.*—The draft of these Regulations was issued on July 10th, 1919, in which it was stated that the Board *proposed* to make such Regulations under the provisions of Section 44 of the Education Act, 1918. The Regulations had been framed in consultation with the Ministry of Health and



the latter, in a circular issued July 14th, 1919, stated that "on and after a date of which due notice will be given, the Ministry will require that all Health Visitors *appointed for the first time* must have obtained the Certificate described in the Regulations."

*Board of Education (Midwives Training) Regulations, 1919.*—These were issued September 19th, 1919, and operate as from April 1st, 1918. Set out therein were the conditions under which the Board of Education, after consultation with the Ministry of Health, had decided to pay grants in aid of the training of midwives.

*Ministry of Health (Consultative Councils) Order, 1919.*—This Order was made under the provisions of Section 4 of the Ministry of Health Act, 1919, and required the establishment of Consultative Councils in England and Wales for giving advice and assistance to the Minister in connection with such matters as relate to (1) Medical and Allied Services, (2) National Health Insurance, (3) Local Health Administration and (4) General Health Questions.

*The Housing Acts (Compulsory Purchase) Regulations, 1919.*—By virtue of these Regulations which came into operation on August 29th, 1919, the regulations of similar title dated 1911 were revoked and an amended procedure was substituted by which the compulsory acquisition of land for housing purposes was expedited. The Regulations were further amended by Regulations issued by the Ministry of Health, October 23rd, 1919.

*The Local Authorities (Assisted Scheme) Regulations, 1919.*—In these regulations, issued December 31st, 1919, were set out the detailed conditions as to grants to local authorities carrying out housing and reconstruction schemes, together with a schedule as to the Rules to be observed by local authorities with regard to the determination of rents to be charged for houses provided under such schemes. The Regulations also revoked the Housing (Assisted Scheme) Regulations issued by the Ministry of Health on October 6th, 1919.

*The County Councils (Assisted Schemes for the Housing of Employees) Regulations, 1919.*—The conditions under which the Exchequer subsidy would be paid to county councils erecting houses for their employees were set out in these regulations, but certain modifications were subsequently made by virtue of the Housing (Additional Powers) Act, 1919, previously alluded to.

*The Public Utility Societies (Financial Assistance) Regulations, 1919.*—The conditions to be observed by Public Utility Societies providing houses for the working classes under financially assisted schemes, were set out in detail in these Regulations by the Minister of Health and approved by the Treasury. Similar regulations, but with the necessary modifications, were also issued applying to Housing Trusts.

*Housing Acts (Form of Orders and Notices) Order, 1919.*—This Order is of extreme importance to local authorities and their administrative officials. In the Schedule is set out in detail the various forms of notice which must be used in administering the provisions of the Housing Acts as regards inspection of premises, execution of works, closing and demolition orders, appeals, etc. The Order also revokes the Order of similar purport which was issued by the Local Government Board, January 11th, 1910, except as regards forms prescribed for use under Section 15 of the Housing Act, 1909.

*The Housing Acts (Appeal Procedure) Rules, 1919.*—These were issued on October 10th, 1919, and the procedure set out in the Regulations issued January 11th, 1910, was thereby superseded, the new conditions with regard to appeals under the Housing Acts being set out.

*The Local Authorities (Waste) Order, 1919.*—This Order confers on local sanitary authorities the power to (a) treat, sell or purchase any waste, and (b) to combine with other sanitary authorities for the collection, preservation, sorting, separation, destruction, sale, etc., of waste. "Waste" is defined as "any house or trade refuse collected by a council in the performance of its duties under the Public Health Act, 1875."

*Rescission of Public Health (Influenza) Regulations, 1919.*—The two sets of Regulations issued in 1918 were rescinded by these Regulations on May 6th, 1919.

*The Public Health (Encephalitis) Regulations, 1919.*—The Regulations of 1918, which operated for one year only, were by these Regulations extended of as to continue in force "until the Minister by Order otherwise directs."

*Relaxation of Building Byelaws Regulations, 1919.*—These were issued by the Ministry of Health under the provisions of Section 25 of the Housing Act, 1919, so as to allow the erection and use for human habitation of buildings of a kind which may not be permissible under existing byelaws but which comply with the Regulations of the Ministry. The Regulations apply until July 31st, 1922.

#### *Circulars and Memoranda.*

The following were issued during the year under review by the Local Government Board or the Ministry of Health, except in those instances where it is expressly stated otherwise, and relating to the matters mentioned :—

#### *Infectious Diseases.*

Circular, Jan.,	1919.	Public Health (Pneumonia, Malaria, Dysentery, &c.) Regulations, 1918.
Memo,	"	Pneumonia.
Circular, Jan. 14,	"	Venereal Diseases—Propaganda.
Memo, April 4,	"	} Hutments for Sanatorium and Hospital Accommodation.
Circular, Oct. 31,	"	
" June 17,	"	Public Health (Cerebro-Spinal Fever) Regulations.
" July 16,	"	} Prevention & Treatment of Venereal Diseases.
" Dec. 30,	"	
" Sept. 15,	"	Discharged Soldiers and Sailors suffering from Tuberculosis.
" Oct. 28,	"	Vaccination Order—Revision of Fees.
" Oct. 31,	"	Tetanus Anti-toxin.
" Dec. 30,	"	Venereal Disease—Form of Annual Return by County Councils.

#### *Maternity and Child Welfare.*

Circular, July 14,	1919.	Training of Health Visitors.
" July 15,	"	Grants in Aid.
Memo, July 10,	"	(Board of Education) Draft Regulations for the Training of Health Visitors.
Circular, Sept. 24,	"	Transfer of certain matters from Board of Education to the Ministry of Health.
" Sept. 30,	"	Training of Midwives.
" Sept. 30,	"	Administration of Part I. of the Children Act, 1908.
" Sept. 14,	"	Supply of Milk for Mothers and Infants.
Memo, Sept.,	"	Draft Regulations for Training of Midwives.
" Nov.,	"	Co-ordination and Control of Maternity and Child Welfare Work.
" Nov.,	"	Provision of Day Nurseries.



*Housing.*

Circular,	Feb. 6,	1919.	}	Financial Assistance to Local Authorities.
Memo,	Dec.,	"		" " " Public Utility Societies,
"	Mar. 24,	"		
"	Oct.,	"	}	&c.
Circular,	April 8,	"	}	Manual as to State Aided Housing Schemes.
"	April 17,	"		Redemption of Tithe on Lands taken by Local Authorities.
Memo,	May,	"		Supply of Building Materials for Housing Schemes.
Circular,	May 2,	"	}	Land for Housing Schemes.
"	June 13,	"		Appointment of Housing Committees.
"	June 11,	"		Periodical Returns of Housing Progress.
"	June 16,	"		Housing Schemes—Streets, Sewers, &c.
Memo,	June,	"		Procedure with regard to Housing Schemes.
"	June,	"		Conversion of Houses into Flats.
Circular,	July 29,	"		Mode of Procedure in submission of Housing Schemes.
Memo,	July 18,	"		
Circular,	Aug. 25,	"		Housing Surveys and Preparation of Housing and Reconstruction Schemes.
Memo,	Aug.,	"		Expenditure of Local Authorities in preparing Housing Schemes.
Circular,	Aug. 30,	"		Duties of County Medical Officer under 1919 Act.
Memo,	Aug. 7,	"		Principal Provisions of 1919 Housing Act.
"	Sept.,	"		Fees payable to Architects and Surveyor in relation to Housing Schemes.
"	Sept. 15,	"		Temporary Housing Accommodation.
"	Sept.,	"	}	Compulsory Acquisition of Land for Housing Purposes.
Circular,	Oct. 31,	"		Housing Powers of County Councils under 1919 Act.
"	Oct. 7,	"		
"	Oct. 11,	"		Forms of Notices under Housing Acts and Rules as to Appeals.
"	Nov. 21,	"		Proposals for accelerating the Provision of Houses.
Memo,	Oct. 19,	"		Relaxation of Building Bye-laws.
"	Nov. 14,	"		Supply of Building Materials to private persons.

*General Matters.*

Circular,	April 17,	1919.		Borrowing of Money by Local Authorities.
"	May 26,	"		Administration of Rag Flock Act, 1911.
"	June 30,	"		Transference of Powers from Local Government Board to Ministry of Health.
"	July 18,	"		Provisions of Ministry of Health Act, 1919.
"	Aug.,	"		Purchase of Government Stores by Local Authorities.
"	Sept. 10,	"		Return of Staffs engaged in Public Health Department.

I have to acknowledge the valuable assistance given me from time to time by medical officers of health, surveyors and sanitary inspectors and the whole-hearted co-operation of my staff.

I am, my lords, ladies and gentlemen,

Your obedient servant,

WILLIAM F. J. WHITLEY.



## THE ADMINISTRATIVE COUNTY.

## AREA.

The area of the County is 1,278,690 acres, divided as follows:—Boroughs, 10,144 acres; urban districts, 64,119 acres; rural districts, 1,204,427 acres.

## POPULATION.

The *civil* population of Northumberland (exclusive of the county boroughs of Newcastle-on-Tyne and Tynemouth) was estimated by the Registrar-General to be 378,128 in the middle of 1919. On this population the mortality rates are calculated.

The population on which the birth rate is calculated was estimated by the Registrar-General to be 393,897, being the population estimated to the middle of 1914 *plus* the natural increase (excess of births over deaths) to the middle of 1919.

## CHANGES IN AREA.

No alteration in the area of sanitary districts or of the administrative county was made during the year under review.

## BOROUGHES, URBAN AND RURAL DISTRICTS, AND PORT SANITARY AUTHORITIES.

The County at the *end* of 1919 was divided for the purpose of sanitary administration into 31 districts, three of which were municipal boroughs, eighteen urban districts, and ten rural districts. There are also the Blyth and Tyne Port Sanitary Authorities. The authorities for the Tweed and Coquet Ports are the Council of the Borough of Berwick-on-Tweed and the Amble Urban District Council respectively.

## BOROUGHES.

Berwick-on-Tweed, Morpeth and Wallsend.

The civil population of the boroughs was estimated to be 61,909 in the middle of 1919.

## URBAN DISTRICTS.

Alnwick, Amble, Ashington, Bedlingtonshire, Blyth, Cramlington, Earsdon, Gosforth, Hexham, Longbenton, Newbiggin-by-the-Sea, Newburn, Prudhoe, Rothbury, Seaton Delaval, Seghill, Weetslade, and Whitley and Monkseaton.

The civil population of the urban districts was estimated to be 222,508 in the middle of 1919.

## RURAL DISTRICTS.

Alnwick, Belford, Bellingham, Castle Ward, Glendale, Haltwhistle, Hexham, Morpeth, Norham and Islandshires and Rothbury.

The civil population of the rural districts was estimated to be 93,711.

The area and population of each sanitary district in the administrative county will be found in a table at the end of this report.

## BIRTHS.

According to the statistics supplied by the Registrar-General the net births belonging to the administrative county numbered 8,723 (6,957 of which occurred in urban and 1,766 in rural districts).

The birth rate for the county was 22·14 (21·54 in 1918 and 20·39 in 1917<sup>1</sup>).

The following table shows the comparative rates :—

	Birth rate.	Increase since 1918.	Decrease since 1918.	Mean rate 1910-1919.
Administrative County ...	22·14	0·60	—	24·45
Urban districts ...	23·48	0·51	—	26·01
Rural districts ...	18·09	0·73	—	20·37
England and Wales ...	18·5	0·8	—	21·8

#### DEATHS.

*Net deaths.*—According to information supplied by the Registrar-General the net deaths numbered 5,335 (4,056 in urban and 1,279 in rural districts).

*Transferable deaths.*—570 inward and 440 outward transfers were reported, being a net balance of 130 inward transfers.

*Registered deaths.*—The deaths registered numbered 5,205 (3,782 in urban and 1,423 in rural districts).

*Rates.*—As the net deaths do not include those of men serving with the forces the mortality rates have been calculated on the civil population.

The following table shows the comparative rates :—

	Death rate.	Increase since 1918.	Decrease since 1918.	Mean rates 1910-1919.
Administrative County ...	14·11	—	3·15	14·12
Urban districts ...	14·26	—	3·28	14·47
Rural districts ...	13·64	—	2·79	13·19
England and Wales ...	13·8	—	3·8	14·4

Details of the deaths and death rates in the several districts are given in the table at the end of this report.

#### INFANT MORTALITY.

	Number of deaths.	Death rate per 1000 births	Increase since 1918.	Decrease since 1918.	Mean rates 1910-1919.
Administrative County ...	894	102	1	—	110
Urban districts ...	775	111	5	—	117
Rural districts ...	119	67	—	15	88
England and Wales ...	61,844	89	—	8	103

The subjoined tables indicate the rates among legitimate and illegitimate infants respectively :—

	Legitimate Infants.		Illegitimate Infants.	
	No. of deaths under 1 year.	Death rate per 1000 births.	No. of deaths under 1 year.	Death rate per 1000 births.
Administrative County ...	814	99	80	157
Urban Districts ...	713	108	62	164
Rural Districts ...	101	62	18	137

DEATHS UNDER 5 YEARS AND AT 65 YEARS AND UPWARDS.  
The rates (per 1,000 population) were as follows :—

	Under 5 years.	65 years and upwards.
Administrative County ... ..	3·7	4·1
Urban districts ... ..	4·2	3·6
Rural districts ... ..	1·9	5·7

#### INFECTIOUS DISEASES.

The returns received by the county medical officer under Article XIX. (13) of the Sanitary Officers (outside London) Order indicate that the cases of notifiable infectious disease in the Administrative County numbered 10,072 (8,278 in urban and 1,794 in rural districts).

The attack rate per 1,000 of population in the Administrative County was 26·6, in the boroughs and urban districts 29·1, and in the rural districts 19·1.

It will be noted, however, that of the above 10,072 notifications received no fewer than 7,275 were of Measles. Excluding Measles the attack rates of notifiable infectious disease were as follows :—In the Administrative County 7·3; in the boroughs and urban districts 8·2; in the rural districts 4·9.

#### INFECTIOUS DISEASES.

##### Summary of Weekly Notifications in 1919.

Sanitary districts.	Smallpox.	Scarlet Fever.	Diphtheria and Membranous Croup.	Enteric Fever.	Typhus Fever.	Puerperal Fever.	Relapsing and Continued Fever.	Cerebro Spinal Meningitis.	Polio myelitis.	Erysipelas.	Ophthalmia Neonatorum.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Pneumonia.	Total number notified excluding measles.	Measles.	Total including measles.
<b>MUNICIPAL BOROUGHS—</b>																	
Berwick-on-Tweed ... ..	—	78	11	3	—	2	—	1	—	4	—	13	3	1	116	174	290
Morpeth ... ..	—	—	6	—	—	—	—	—	—	2	—	5	—	—	13	186	199
Wallsend ... ..	—	105	70	5	—	—	—	1	1	32	13	56	12	78	373	1053	1426
<b>URBAN DISTRICTS—</b>																	
Alnwick ... ..	—	5	9	1	—	—	—	—	—	2	—	3	—	—	20	117	137
Amble ... ..	—	2	7	—	—	—	—	—	—	3	1	2	—	2	17	100	117
Ashington ... ..	—	113	88	76	—	1	—	—	—	32	5	55	23	58	451	1028	1479
Bedlingtonshire ... ..	—	45	39	4	—	3	—	—	—	10	6	50	12	52	221	610	831
Blyth ... ..	—	23	46	4	—	—	—	—	—	26	8	52	13	43	215	814	1029
Cramlington ... ..	—	48	—	1	—	—	—	—	—	1	—	2	1	3	56	3	59
Earsdon ... ..	—	42	15	1	—	—	—	—	—	5	12	11	8	12	106	207	313
Gosforth ... ..	—	13	16	1	—	1	—	—	—	4	4	21	3	4	67	45	112
Hexham ... ..	—	5	6	—	—	—	—	—	—	4	2	7	2	8	34	52	86
Longbenton ... ..	—	16	19	—	—	—	—	2	—	6	3	16	6	33	101	223	324
Newbiggin-by-the-Sea ... ..	—	12	7	—	—	—	—	—	—	—	—	—	—	3	22	267	289
Newburn ... ..	—	82	39	4	—	2	—	—	1	9	3	20	3	46	209	559	768
Prudhoe ... ..	—	42	4	—	—	—	—	—	—	6	—	4	5	2	63	21	84
Rothbury ... ..	—	1	1	—	—	—	1	—	—	—	—	2	2	—	7	90	97
Seaton Delaval ... ..	—	2	18	—	—	—	—	—	—	7	—	6	5	1	39	77	116
Seghill ... ..	—	—	5	—	—	—	—	—	—	1	—	—	—	—	6	5	11
Weetslade ... ..	—	15	39	—	—	1	—	—	—	7	—	10	6	9	87	47	134
Whitley & Monkseaton ... ..	—	38	22	1	—	1	—	—	—	5	1	9	10	26	113	264	377
<b>RURAL DISTRICTS—</b>																	
Alnwick ... ..	—	25	27	1	—	—	—	—	—	3	1	4	2	1	64	174	238
Belford ... ..	—	22	2	—	—	—	—	—	—	5	—	2	—	4	35	47	82
Bellingham ... ..	—	2	—	—	—	—	—	1	—	2	1	2	1	—	9	16	25
Castle Ward ... ..	—	13	6	3	—	—	—	—	—	4	2	18	12	25	83	107	190
Glendale ... ..	—	5	2	2	—	1	—	—	2	2	—	4	—	4	22	39	61
Haltwhistle ... ..	—	4	30	—	—	—	—	—	—	3	—	2	—	1	40	110	150
Hexham ... ..	—	32	20	1	—	—	—	—	—	13	—	10	1	18	95	71	166
Morpeth ... ..	—	20	21	1	—	—	—	—	—	9	2	16	10	1	80	647	727
Norham & Islandshires ... ..	—	3	—	—	—	—	—	—	—	1	—	6	—	1	11	33	44
Rothbury ... ..	—	5	1	—	—	—	—	—	—	1	—	4	—	3	14	87	101
<b>PORT SANITARY AUTHORITIES—</b>																	
River Tyne Port ... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
River Blyth Port ... ..	—	—	—	1	—	—	—	—	—	—	—	—	—	7	8	1	9
<b>Totals ... ..</b>	<b>—</b>	<b>818</b>	<b>576</b>	<b>110</b>	<b>—</b>	<b>12</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>209</b>	<b>64</b>	<b>412</b>	<b>140</b>	<b>446</b>	<b>2797</b>	<b>7275</b>	<b>10072</b>



Among administrative counties in England and Wales the attack rate in Northumberland from the principal infectious diseases ranked as follows :—

Scarlet fever 11th highest; Diphtheria, 13th; Enteric fever, 2nd; Puerperal fever, 35th; Erysipelas, the highest.

As regards notifications of the following diseases, Northumberland ranked as under :—

Cerebro-spinal fever, 16th; Ophthalmia Neonatorum, 13th; Pulmonary Tuberculosis, 17th; other tubercular diseases, 12th; Poliomyelitis, 48th.

The highest attack rates (per 1,000 population) from notifiable infectious diseases in districts in the administrative county were stated by the Registrar-General to be as follows :—

*Scarlet fever.*—Borough of Berwick-on-Tweed 7·59, Cramlington 6·08, Belford 5·09 and Newburn 4·95.

*Diphtheria.*—Weetslade 5·87, Haltwhistle 3·33, Ashington 3·24 and Seghill 2·59.

*Enteric fever.*—Ashington 2·71, Berwick 0·26, Glendale 0·26 and Newburn 0·22.

*Puerperal fever.*—Berwick 0·17, Weetslade 0·15, Glendale 0·13 and Bedlingtonshire 0·12.

*Erysipelas.*—Belford 1·16, Ashington 1·13, Seaton Delaval 1·13 and Weetslade 1·05.

The attack rates (per 1,000 population) for England and Wales, for the administrative counties of Northumberland and Durham and for other administrative counties in which infectious diseases were chiefly prevalent were as follows :—

	Scarlet fever.	Diphtheria.	Enteric fever.	Puerperal fever.	Erysipelas.
England and Wales	2·29	1·52	0·10	0·06	0·44
Northumberland	2·27	1·58	0·29	0·03	0·57
Durham	4·57	1·49	0·13	0·03	0·43

  

Administrative Counties in which the attack rate was highest :—	Durham	4·57	Hunt- } 2·90	Breck- } 0·85	Somerset	0·09	North- } 0·57
	Mon- } 3·86	Cornwall	2·67	North- } 0·29	Mont- } 0·08	gomery	land } 0·51
	Flint.	3·63	Lincs. } 2·26	umber- } 0·25	Oxford- } 0·07	shire	shire } 0·50
	Denbigh	3·59	(Hol- } 2·12	Isle of } 0·22	Wilt- } 0·07	shire	West- } 0·49
			Essex	Wight	Cardi- } 0·07	gansh'e	morla'd }
				Derby- } 0·22			Essex
				shire			

ZYMOTIC DISEASES.

The zymotic diseases which are generally notifiable are Small-pox, Scarlatina, Diphtheria, Fevers (Typhus, Enteric, Continued, and

Relapsing) and Measles. The seven principal zymotic diseases, upon which the zymotic death rate is calculated, are the five just mentioned, and in addition Whooping Cough and Diarrhoea and Enteritis (under 2 years).

Three hundred and forty-eight deaths were caused by the seven principal zymotic diseases, being a decrease of 34 compared with the number registered in 1918. Of these deaths 304 took place in the urban and 44 in the rural districts.

The three zymotic diseases which caused the greatest mortality were :

Diseases.	Number of deaths.		
	1919.	1918.	1917.
Diarrhoea and Enteritis (under 2 years)	114	114	109
Measles ... ..	101	48	70
Diphtheria... ..	67	71	54

As Diarrhoea and Enteritis and Whooping Cough are not generally notifiable, no information can be given as to the number of cases which occurred.

The comparative rates for zymotic diseases are set out in the following table :—

	Death Rate.	Increase since 1918.	Decrease since 1918.
Administrative County ...	0·92	—	0·15
Urban districts ... ..	1·07	—	0·21
Rural districts ... ..	0·47	0·01	—
England and Wales ... ..	0·52	—	0·43

Table shewing death rates, per 1,000 living, from each of the seven principal zymotic diseases for the five years ended Dec. 31st, 1919 :—

Diseases.	1915.	1916.	1917.	1918.	1919.	Increase 1919-1918.	Decrease 1919-1918.
Smallpox ... ..	Nil.	Nil.	Nil.	Nil.	Nil.	—	—
Scarlatina ... ..	0·126	0·050	0·039	0·019	0·047	0·028	—
Diphtheria ... ..	0·167	0·123	0·151	0·199	0·177	—	0·022
Enteric Fever ... ..	0·035	0·039	0·042	0·126	0·032	—	0·094
Measles ... ..	0·842	0·207	0·196	0·135	0·267	0·132	—
Whooping Cough	0·387	0·151	0·232	0·273	0·095	—	0·178
Diarrhoea & Enteritis (under 2 years)	0·488	0·268	0·305	0·476	0·301	—	0·175

## Cases of zymotic diseases notified from each district :—

District.	Number of cases notified.	Number of persons per 1000, attacked by zymotic diseases notified.*	Mortality rate per 1000 from zymotic diseases notified or ascertained.	Mortality rates.	
				Increase since 1918.	Decrease since 1918.
URBAN.					
Alnwick ... ..	160	24·5	0·30	—	0·19
Amble ... ..	109	23·9	0·88	0·63	—
Ashington ... ..	1319	46·3	2·35	—	0·17
Bedlingtonshire ...	698	27·0	1·08	—	0·82
Berwick-on-Tweed, boro' of	266	22·1	0·77	0·13	—
Blyth ... ..	892	28·3	1·58	—	0·02
Cramlington ... ..	52	6·5	0·25	—	0·54
Earsdon ... ..	274	27·4	0·70	—	0·69
Gosforth ... ..	75	4·8	0·38	—	0·30
Hexham ... ..	100	12·8	0·25	—	2·31
Longbenton ... ..	264	20·1	0·68	—	0·68
Morpeth, boro' of ...	192	28·9	2·26	0·51	—
Newbiggin-by-the-Sea ...	286	37·1	0·51	—	0·37
Newburn ... ..	703	37·8	0·91	—	0·05
Prudhoe ... ..	79	9·3	0·24	—	0·75
Rothbury ... ..	91	79·0	nil	—	0·93
Seaton Delaval ... ..	102	14·3	0·56	0·10	—
Seghill ... ..	10	5·1	2·06	—	5·12
Wallsend, boro' of ...	1215	27·8	1·21	0·39	—
Weetslade ... ..	112	16·8	1·80	0·33	—
Whitley & Monkseaton	328	16·5	0·25	—	0·09
RURAL.					
Alnwick ... ..	221	19·0	1·11	0·83	—
Belford ... ..	71	16·4	0·46	0·22	—
Bellingham ... ..	19	3·6	nil	—	0·39
Castle Ward ... ..	143	12·7	0·35	—	0·46
Glendale ... ..	50	6·4	nil	—	0·26
Haltwhistle ... ..	144	15·9	1·10	—	0·24
Hexham ... ..	139	6·6	0·14	—	0·11
Morpeth ... ..	628	44·1	0·70	0·18	—
Norham & Islandshires...	36	6·9	nil	—	0·19
Rothbury ... ..	113	27·2	nil	—	—

\* Exclusive of Whooping Cough and Diarrhœa and Enteritis, the attack rate for which cannot be ascertained, owing to these diseases not being generally notified.

## SMALL-POX, CHOLERA, PLAGUE, ANTHRAX (in human subjects).

No cases were reported.

## TYPHUS FEVER.

No case was notified; no death occurred.

## CEREBRO-SPINAL MENINGITIS.

Five cases were notified; one death occurred.

## POLIOMYELITIS.

Four cases were notified; three deaths occurred.



## CHICKEN-POX.

Chicken-pox was reported from six sanitary districts; the chief interest in connection with the disease is its resemblance to a very modified type of Small-pox.

## SCARLATINA.

The notifications numbered 818 (687 from urban and 131 from rural districts). The mortality from this disease was 18 (15 deaths occurring in urban and 3 in rural districts). In 1918, 7 deaths were reported and in 1917, 14.

		Death rate per 1000 population.	Increase since 1918.	Decrease since 1918.	Attack rate per 1000 living.
Administrative County	...	0·047	0·028	—	2·16
Urban districts	...	0·053	0·034	—	2·41
Rural districts	...	0·032	0·010	—	1·39
England and Wales	...	0·03	—	—	2·29

The greatest number of cases occurred in the urban district of Ashington (113), the borough of Wallsend (105), the urban district of Newburn (82) and the borough of Berwick-on-Tweed (78).

## ENTERIC FEVER.

One hundred and ten cases (101 in urban and 9 in rural districts) were notified, resulting in 12 deaths (11 in urban and 1 in rural districts). In 1918 the mortality was 45 and in 1917, 15.

		Death rate per 1000 population.	Increase since 1918.	Decrease since 1918.	Attack rate per 1000 living.
Administrative County	...	0·032	—	·094	0·29
Urban districts	...	0·038	—	·131	0·35
Rural districts	...	0·011	·011	—	0·09
England and Wales	...	0·01	—	·02	0·10

The greatest number of cases occurred in the urban district of Ashington (76); from no other single district were more than a few cases reported.

## DIPHTHERIA AND MEMBRANOUS CROUP.

The notifications numbered 576 (467 from urban and 109 from rural districts). The diseases (one or both) were notified from 29 districts. (29 in 1918).

Sixty-seven deaths occurred (48 in urban and 19 in rural districts).

		Death rate per 1000 population.	Increase since 1918.	Decrease since 1918.	Attack rate per 1000 living.
Administrative County	...	0·177	—	0·022	1·52
Urban districts	...	0·168	—	0·051	1·64
Rural districts	...	0·202	0·058	—	1·16
England and Wales	...	0·13	—	0·01	1·52

## MEASLES.

The notifications numbered 7,275 (5,942 from urban and 1,333 from rural districts). One hundred and one deaths occurred (93 in urban and 8 in rural districts); 48 deaths were reported in 1918 and 70 in 1917.

			Death Rate per 1,000.	Increase since 1918.	Decrease since 1918.
Administrative County	...	...	0·26	0·13	—
Urban districts	...	...	0·32	0·17	—
Rural districts	...	...	0·08	0·04	—
England and Wales	...	...	0·10	—	0·18

## WHOOPING COUGH.

The deaths numbered 36 (28 in urban and 8 in rural districts); 97 deaths were reported in 1918 and 78 in 1917.

			Death Rate per 1,000.	Increase since 1918.	Decrease since 1918.
Administrative County	...	...	0·095	—	0·178
Urban districts	...	...	0·098	—	0·207
Rural districts	...	...	0·085	—	0·092
England and Wales	...	...	0·07	—	0·22

## PUERPERAL FEVER.

This disease caused 14 deaths (12 in urban and 2 in rural districts) compared with 7 in 1918 and 9 in 1917.

			Death Rate per 1,000.	Increase since 1918.	Decrease since 1918.
Administrative County	...	...	0·037	0·018	—
Urban districts	...	...	0·042	0·016	—
Rural districts	...	...	0·021	0·021	—

The distribution of the 14 deaths was as follows :—Berwick 1, Wallsend 4, Ashington 1, Bedlingtonshire 2, Gosforth 1, Longbenton 1, Newburn 1, Whitley and Monkseaton 1, Belford 1, and Glendale 1.

## ERYSIPELAS.

The deaths numbered 5 (all in urban districts). Eleven deaths occurred in 1918 and 2 in 1917.

			Death Rate. per 1,000.	Increase since 1918.	Decrease since 1918.
Administrative County	...	...	0·013	—	0·018
Urban districts	...	...	0·017	—	0·020
Rural districts	...	...	Nil.	—	0·011

## DIARRHŒA AND ENTERITIS.

*At all ages.*

The number of deaths of all ages was 160 (143 in urban and 17 in rural districts). In 1918, 169 deaths occurred and in 1917, 157.

				Death Rate. per 1,000.	Increase since 1918.	Decrease since 1918.
Administrative County	...	...	...	0·42	—	0·05
Urban districts	...	...	...	0·50	—	0·08
Rural districts	...	...	...	0·18	0·04	—

*Under 2 years.*

The deaths from this cause, under 2 years of age, numbered 114 (114 in 1918 and 109 in 1917); 109 occurred in urban and 5 in rural districts.

				Death Rate. per 1,000 births.	Increase since 1918.	Decrease since 1918.
Administrative County	...	...	...	13·07	—	0 23
Urban districts	...	...	...	15·67	—	0·02
Rural districts	...	...	...	2·83	—	1·16
England and Wales	...	...	...	9·59	—	1·40

## TUBERCULOSIS.

Year.	Phthisis.		Other tubercular diseases.		Total deaths from Tuberculosis.		
	Deaths.	Death Rate per 100,000 living.	Deaths.	Death Rate per 100,000 living.	Deaths.	Death Rate per 100,000 living.	
1915	...	376	103	197	54	573	157
1916	...	394	110	187	52	581	162
1917	...	378	106	194	54	572	160
1918	...	434	122	164	46	598	168
1919	...	367	97	136	36	503	133
Mean 1910-1919		372	107	193	49	565	156

Of the 503 deaths caused by Tuberculosis 410 occurred in boroughs and urban districts (population 284,417) and 93 rural districts (population 93,711). During the five years 1915-1919 inclusive the average mortality from all forms of tubercular diseases was 156 and from Phthisis 107 per 100,000; during the preceding quinquennial period the average rates were 144 and 92 respectively per 100,000.



PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912,  
AND  
Public Health (Tuberculosis) Regulations (No. 2), 1918.

SUMMARY OF NOTIFICATIONS DURING THE PERIOD FROM THE 29TH DECEMBER, 1918, TO THE  
3RD JANUARY, 1920, IN THE COUNTY OF NORTHUMBERLAND.

Age-periods.	Notifications on Form A.											Total Notifications on Form A.	
	Number of Primary Notifications.												
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards.		Total Primary Notifications.
Pulmonary Males ...	—	5	11	10	21	31	52	32	37	5	1	205	214
"    Females ...	—	5	14	23	19	32	42	33	11	7	4	190	195
Non-pulmonary Males ...	—	15	19	15	5	4	7	4	2	1	1	73	73
"    Females ...	—	16	15	12	6	5	3	3	2	—	—	62	65
Col. (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

Age-periods.	Notifications on Form B.							Number of Notifications on Form C.			
	Number of Primary Notifications.				Total Notifications on Form B.			Poor Law Institutions.	Sanatoria.		
	Under 5	5 to 10	10 to 15	Total Primary Notifications.							
Pulmonary Males ...	—	—	—	—	—	—	—	5	19		
"    Females ...	—	—	—	—	—	—	—	2	31		
Non-pulmonary Males ...	—	—	—	—	—	—	—	—	8		
"    Females ...	—	—	—	—	—	—	—	—	8		
(15)	(16)	(17)	(18)	(19)	(20)	(21)					

In the Administrative County the provision for institutional treatment of Tuberculosis during the year consisted of 62 beds at Barrasford Sanatorium, 20 at Fellside Sanatorium, Hexham, and 200 at the sanatorium for children at Stannington, and, in addition, five dispensaries, maintained by the county council, viz., at Wallsend, Newburn, Hexham, Ashington and Blyth.

The county council continued, in pursuance of an arrangement made with the Northumberland Insurance Committee, to undertake the institutional treatment for all suitable applicants, whether insured or uninsured, in accordance with the scheme adopted by the council before the war, and sent patients to the above-mentioned sanatoria in this county and also to similar institutions without the county area.

#### PHTHISIS.

Of the 367 deaths caused by this disease, 293 occurred in urban and 74 in rural districts. The number of deaths in 1918 was 434 and in 1917, 378.

			Death Rate per 1,000 population	Increase since 1918.	Decrease since 1918.
Administrative County	...	...	0·97	—	0·25
Urban districts	...	...	1·03	—	0·18
Rural districts	...	...	0·78	—	0·47

The deaths from Phthisis in the administrative county during the last five years have averaged 107 per 100,000, which is more than all the deaths arising from Scarlet Fever, Diphtheria, Enteric Fever, Measles, and Whooping Cough, which only averaged 83 per 100,000 during the same period.

REPORT OF COUNTY TUBERCULOSIS OFFICER.—*See Appendix.*

#### RESPIRATORY DISEASES.

Respiratory diseases (exclusive of Phthisis) caused 860 deaths in the administrative county during the year; 693 occurred in the urban and 167 in the rural districts.

The following table shows the comparative rates :—

			Death Rate per 1,000.	Increase since 1918.	Decrease since 1918.
Administrative County	...	...	2·21	—	0·40
Urban districts	...	...	2·40	—	0·38
Rural districts	...	...	1·78	—	0·32

#### INFLUENZA.

Four hundred and ninety-one deaths were recorded (391 in urban and 100 in rural districts) as directly attributable to this disease. The deaths during 1918 numbered 1,121.

			Death Rate per 1,000.	Increase since 1918.	Decrease since 1918.
Administrative County	...	...	1·29	—	1·87
Urban districts	...	...	1·37	—	1·80
Rural districts	...	...	1·06	—	2·06

The decreased incidence of Influenza undoubtedly contributed to the lower mortality from respiratory diseases indicated above.

## BACTERIOLOGICAL EXAMINATIONS.

The number of specimens sent for examination during the year was 2,896, compared with 1,333 in 1918, and 1,369 in 1917.

The facilities provided by the county council for bacteriological examination in cases of suspected Phthisis, Diphtheria and Enteric Fever continued to be appreciated by practitioners throughout the administrative county.

Specimens from suspected cases of one or more of the above diseases were received, during the year, from every sanitary district in the administrative county.

The following table indicates the distribution of the specimens among the sanitary districts from which they were received.

Sanitary Districts.	Diphtheria.		Tuber- culosis.		Enteric Fever.		Total specimens examined.		Total.
	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.	Positive.	Negative.	
MUNICIPAL BOROUGHES.									
Berwick-on-Tweed ...	4	4	10	31	—	1	14	36	50
Morpeth ...	1	3	1	4	—	—	2	7	9
Wallsend ...	67	226	43	149	2	12	112	387	499
URBAN DISTRICTS.									
Alnwick ...	12	31	1	17	1	1	14	49	63
Amble ...	3	12	1	1	—	—	4	13	17
Ashington ...	5	10	9	62	38	14	52	86	138
Bedlingtonshire ..	53	771	8	34	3	9	64	814	878
Blyth ...	7	3	12	39	—	4	19	46	65
Cramlington ...	—	—	1	9	—	—	1	9	10
Earsdon ...	3	—	7	27	—	—	10	27	37
Gosforth ...	16	104	19	46	1	3	36	153	189
Hexham ...	6	23	14	49	—	—	20	72	92
Longbenton ...	25	123	10	48	—	5	35	176	211
Newbiggin-by-the-Sea	4	11	—	9	—	—	4	20	24
Newburn ...	6	42	6	27	—	1	12	70	82
Prudhoe ...	—	1	1	8	—	—	1	9	10
Rothbury ...	—	—	—	8	—	—	—	8	8
Seaton Delaval ...	1	5	5	8	—	—	6	13	19
Seghill ...	—	—	1	2	—	—	1	2	3
Weetslade ...	16	81	3	19	—	1	19	101	120
Whitley & Monkseaton	6	21	1	18	—	4	7	43	50
RURAL DISTRICTS.									
Alnwick ...	14	22	3	6	1	2	18	30	48
Belford ...	3	2	1	2	—	—	4	4	8
Bellingham ...	—	2	3	15	—	—	3	17	20
Castle Ward ...	1	10	4	28	2	5	7	43	50
Glendale ...	2	2	3	4	—	—	5	6	11
Haltwhistle ...	—	2	1	4	—	—	1	6	7
Hexham ...	16	58	6	54	1	10	23	122	145
Morpeth ...	3	3	1	16	—	2	4	21	25
Norham & Islandshire	—	—	—	4	—	—	—	4	4
Rothbury ...	—	2	1	1	—	—	1	3	4
Totals ...									
Totals ...	274	1574	176	749	49	74	499	2397	2896



## ISOLATION HOSPITALS.

The amount of hospital accommodation available for infectious disease was as indicated in the subjoined table.

The population of the 29 sanitary districts for which isolation hospital accommodation was provided was 363,904, and the beds available numbered 501, giving one bed for each 726 of population.

Cases isolated in hospital during the year numbered 674, being distributed as indicated in the table at the end of this report.

The rural districts of Bellingham and Haltwhistle with a combined population of 14,224 were still without provision for isolating cases of infectious disease.

	Popula- tion served.	Number and kind of hospitals provided.	Beds provided for		
			Small- pox.	Infectious diseases other than Small-pox	Small-pox or other Infectious diseases.
JOINT HOSPITAL DISTRICTS.					
<i>Earsdon Joint Hospital District</i> —					
The urban district of Earsdon ...	51,948	One iron and wood building :—			
do. do. Seghill ...		At Scaffold Hill ...	...	72	...
do. do. Whitley and Monkseaton		At Earsdon ...	16	...	...
do. do. Longbenton ...					
do. do. Seaton Delaval					
<i>Gosforth, Newburn, and Castle Ward Joint Hospital Dis- trict—</i>					
The urban district of Gosforth...	45,380	Permanent Building...	...	32	...
do. do. Newburn					
The rural district of Castle Ward	18,153	Iron and wood building	12	...	...
The urban and rural districts of Alnwick	5,296	do. ...	3	8	...
Urban district of Rothbury ...					
Rural do. do. ...					
HOSPITALS PROVIDED BY INDIVIDUAL SANITARY AUTHORITIES.					
Borough of Berwick-on-Tweed...	11,588	One wooden building	6	...	...
do. Morpeth ...	6,632	Wooden huts ...	...	8	...
		Iron building ...	4	...	...
		Brick building ...	...	20	...
The borough of Wallsend ...	43,689	Permanent building ...	20	...	...
		do. ...	...	86	...
		do. ...	...	12	...
Urban district of Alnwick ...	6,524	Iron building ...	4	...	...
do. do. Amble... ...	4,547	One iron building ...	23	...	...
do. do. Ashington ...	28,432	Brick building ...	...	12	...
Urban district of Bedlingtonshire	25,845	One brick building ...	10	...	...
		Iron and brick building ...	...	18	...
do. do. Blyth ...	31,480	Permanent building ...	...	8	...
do. do. Cramlington ...	7,896	One iron and wood building	...	12	...
		do. ...	12	...	...
Urban district of Hexham ...	7,777	Two iron and wood buildings	8	16	...
do. do. Newbiggin-by- the-Sea ...	7,701	One wooden hospital...	5	...	...
do. do. Newburn ...	18,578	One iron and wood hospital	4	...	...

				Popula- tion served.	Number and kind of hospitals provided.	Beds provided for			
						Small- pox.	Infectious diseases other than Small-pox	Small-pox or other Infectious diseases.	
HOSPITALS PROVIDED BY INDIVIDUAL SANITARY AUTHORITIES— <i>continued</i> .									
Rural	do.	Belford	...	4,318	One iron and wood hospital	8	...	...	
do.	do.	Castle Ward	...	11,235	Wooden hospital	12	...	...	
do.	do.	Glendale	...	7,738	Two cottages	...	...	...	8
do.	do.	Hexham	...	20,982	One iron and wood hospital	12	...	...	
					do.	...	12	...	
do.	do.	Morpeth	...	14,233	do.	12	...	...	
do.	do.	Norham and Islandshires	...	5,207	do.	6	...	...	
River Tyne	Port Sanitary Authority				Floating hospital	...	...	...	40
River Blyth	Port Sanitary Authority				Permanent building	...	20	...	(Cholera, Plague, Yellow Fever or Small-pox)
SANITARY AUTHORITIES HAVING MADE ARRANGEMENTS FOR PATIENTS TO BE RECEIVED BY NEIGHBOURING SANITARY AUTHORITIES:—									
Urban district of Blyth			...	31,480	Patients from this district are received into the hospital of the Blyth Port Sanitary Authority	...	...	...	
do.	do.	Prudhoe	...	8,415	Patients from this district are received into the Edgewell hospital of the Hexham Rural District Council	...	...	...	
do.	do.	Weetslade	...	6,647	Patients from this district are received into the Gosforth, Newburn and Castle Ward Joint Hospital	...	...	...	
SANITARY AUTHORITIES HAVING MADE PROVISION FOR THE ISOLATION OF SMALL-POX CASES ONLY:—									
Urban district of Newbiggin-by-the-Sea			...	7,701	Wooden hospital	5	...	...	
Rural district of Alnwick (jointly with Alnwick U.D.)			...	11,629	Iron and wood building	12	...	...	
		Belford	...	4,318	do.	8	...	...	
		Norham and Islandshires	...	5,207	do.	6	...	...	
SANITARY AUTHORITIES WITHOUT ANY HOSPITAL FOR INFECTIOUS DISEASES AND WITH NO ARRANGEMENTS WITH NEIGHBOURING SANITARY AUTHORITIES:—									
Rural district of Bellingham			...	5,213		...	...	...	
do.	do.	Haltwhistle	...	9,011		...	...	...	

## SALE OF FOOD AND DRUGS ACTS.

The samples taken for analysis under the above Acts, the results of the analysis and the percentage of samples adulterated are shown in the following table :—

No. of Samples taken.	Description of Article.	Result of Analysis.			Percentage of Samples Not Genuine.	Vendor Prosecuted.	Convictions including cases dismissed on payment of costs.
		Genuine.	Not Genuine.	Doubtful.			
119	Milk ... ..	102	16	1	13.44	11	5
20	Baking Powder ... ..	20	—	—	—	—	—
16	Lard ... ..	16	—	—	—	—	—
13	Coffee ... ..	13	—	—	—	—	—
13	Pepper ... ..	13	—	—	—	—	—
12	Vinegar ... ..	11	1	—	8.33	1	1
10	Self-raising Flour ... ..	10	—	—	—	—	—
10	Margarine ... ..	1	—	9	—	—	—
9	Butter ... ..	7	—	2	—	—	—
9	Egg Powder ... ..	9	—	—	—	—	—
8	Cocoa ... ..	8	—	—	—	—	—
8	Ground Rice ... ..	8	—	—	—	—	—
8	Jam ... ..	8	—	—	—	—	—
5	Cream of Tartar ... ..	5	—	—	—	—	—
5	Mustard ... ..	2	*3	—	60.00	—	—
4	Rice ... ..	4	—	—	—	—	—
4	Arrowroot ... ..	4	—	—	—	—	—
3	Castor Oil ... ..	3	—	—	—	—	—
3	Corn Flour ... ..	3	—	—	—	—	—
3	Custard Powder ... ..	3	—	—	—	—	—
3	Bread ... ..	3	—	—	—	—	—
3	Dried Eggs ... ..	3	—	—	—	—	—
3	Ground Ginger ... ..	3	—	—	—	—	—
3	Oatmeal ... ..	3	—	—	—	—	—
3	Honey ... ..	3	—	—	—	—	—
3	Lemon Curd ... ..	3	—	—	—	—	—
3	Tapioca ... ..	3	—	—	—	—	—
2	Carbonate of Soda ... ..	2	—	—	—	—	—
2	Camphorated Oil ... ..	2	—	—	—	—	—
2	Condensed Milk ... ..	2	—	—	—	—	—
2	Glycerine ... ..	2	—	—	—	—	—
2	Jellies ... ..	2	—	—	—	—	—
1	Bread and Butter ... ..	—	—	1	—	—	—
1	Ground Cinnamon ... ..	1	—	—	—	—	—
1	Marmalade ... ..	1	—	—	—	—	—
1	Whisky ... ..	1	—	—	—	—	—
7	Other foods (one each) ... ..	7	—	—	—	—	—
5	Other drugs (one each) ... ..	5	—	—	—	—	—
329	Total Samples ... ..	296	20	13	6.07	12	6

\* No proceedings taken—Vendors protected by label.

The percentages of samples found on analysis to be “not genuine” for the nine previous years 1910-1918, inclusive, were as follows :—9.05, 14.2, 7.2, 11.7, 11.9, 10.9, 7.9, 10.9, 9.8; and for 1919, as shewn above, 6.07.

The above table relates to the whole of the administrative county except the borough of Berwick-upon-Tweed, which is a separate authority under the Sale of Food and Drugs Acts. No report as to the administration of these Acts in the borough of Berwick-upon-Tweed was received.



No samples were taken for the purposes of the Public Health (Milk and Cream) Regulations, 1912, all the samples included in the above tabular statement having been purchased in accordance with the formalities required by the Sale of Food and Drugs Acts. No informal samples were taken.

#### THE ADMINISTRATION OF THE HOUSING OF THE WORKING CLASSES ACTS, 1890—1919.

The conditions which existed practically throughout the year under review were of such a character that housing administration in the accepted sense of the term was impossible, and the returns under the Housing Regulations from the various districts were so meagre that tabulation has not been attempted, as it would have served no useful purpose.

The acute shortage of houses, which had progressively increased during the war, made it a matter of practical impossibility to issue and enforce closing orders or to temporarily remove tenants in order that works of reconstruction or drastic repair could be carried out; even if this difficulty had been overcome the shortage of material and labour would have had a like effect; consequently the returns for the whole county of improvements effected are so small as to be almost negligible.

The annual return required by the Housing Regulations, 1910, was received from only eleven of the thirty-one sanitary authorities in the administrative county. From these it appeared that 4,041 houses were inspected, more than three-fourths of which were in the Hexham rural district, 385 were found to be unfit for habitation; in addition six complaints of "unfit" houses were received from householders but none from parish councils. Thirteen representations to local authorities were made as regards closing orders and eight such orders were made. Seven houses were voluntarily demolished (Morpeth Borough 3, Bedlington 4). In 259 instances houses were improved and rendered fit for habitation after the service of informal notices. No notices under Sec. 28 of the 1919 Act appear to have been served during 1919.

#### *Survey of Housing Needs.*

A most important step in the direction of housing reform was taken, however, during the year under review. The survey of housing needs and the preparation of housing schemes as required by Sec. 1 of the 1919 Act was undertaken by the respective sanitary authorities of the administrative county; the returns were sent to the Regional Housing Commissioner, and a copy of each return was sent to the County Medical Officer. As a result of the collaboration between the Commissioner and the County Health Department, several important amendments to the schemes submitted were made, special attention being given to those schemes which were obviously insufficient for meeting the needs of any district; at the same time a much more uniform method of arriving at the "housing need" was adopted. The total shortage of houses as estimated by the several authorities for their respective areas was 15,586 houses, whilst the schemes submitted indicated proposals for 11,770 houses, to which should be added 596 houses which, it was contemplated, would be built by private enterprise.

In tabulating these returns, the County Medical Officer reported to the County Council that the prospective schemes were, in many instances, wholly inadequate if the housing needs of the county were to be met, and he estimated that the provision of 14,139 houses was required if even the 1911 standard of housing accommodation was to be reached. The census of that year, however, showed that the rate of overcrowding

for this county was the highest in the country, and therefore a considerable number of houses (additional to the estimate of 14,139) were needed if overcrowding was to be reduced. These conclusions have been fully substantiated by the detailed consideration given to each return by the Ministry of Health and the amended schemes which have been accepted by the Ministry and classed as "adequate" (with a few minor instances still under consideration) show that there was a *post-war total* "need" of 19,604 new houses. In other words, there were 88,218 persons in the county out of a total population of 398,877 (or 22·4 per cent.) who were in need of housing accommodation, including persons who were living in houses which were unfit for human habitation and which could not be made reasonably fit.

The unfortunate delay, due to many causes, which has occurred in meeting this acute need of additional accommodation has been such that any hope of tackling the stupendous problem of rendering the existing houses fit for habitation had to be temporarily abandoned with the result that thousands (literally) of houses in the county not kept "in all respects reasonably fit for human habitation" have had to be left in that condition although legislation has provided effective means for securing the adoption of remedial measures. The returns show that—

- (1) There were at least 1,328 houses in the administrative county which were so hopelessly "unfit" that nothing but closure and demolition would be satisfactory.
- (2) That at least 3,245 houses were "known to be seriously defective," and would therefore require considerable alterations involving, in most instances, reconstruction, and therefore the temporary removal of the existing tenants.
- (3) There were at least 5,409 houses situate in insanitary areas, many of which would require very considerable alterations and improvements while others could only be effectively dealt with by demolition so as to improve the surroundings of neighbouring dwellings.

The impossibility of effectively dealing with these conditions (quite apart from the difficulties *re* securing materials and skilled labour) owing to the lack of alternative accommodation is apparent when these factors are considered.

At the end of 1919 there were nearly 5,000 houses, originally built each for one family, which were occupied by *two or more* families, this number representing 7 per cent. of the total working class housing accommodation. In some districts the percentage of houses occupied as above was much higher, *e.g.*, Ashington, 17 per cent.; Wallsend, Alnwick Urban and Newbiggin each 13 per cent.; Whitley and Monkseaton and Newburn each 11 per cent.

Obviously the initial step in dealing with this huge problem is the erection of additional new houses. No real improvement can be attempted until this has been effected, but, for the time being, county councils are relieved of their supervisory powers in this direction as the Ministry of Health deals directly with the various local authorities whose duty it is to provide the necessary schemes. The next step will be the selection of tenants for the houses that are being provided and, in this matter, a definite policy should be decided upon only after very careful consideration, and especially having regard to the tenants of houses admittedly unfit for habitation. The returns show that there are in the administrative county over 5,000 houses situate in insanitary areas, and that about 5,000 others are either totally unfit or are "known to be seriously defective," and which, in most instances, can only be made fit by the temporary removal of the tenants. In deciding, therefore, who shall be the tenants of the new houses careful consideration should be given to the following points:—



- (a) Will the new accommodation be entirely reserved, in the first instance, for those families requiring houses who are now sub-tenants in existing houses which, though overcrowded, are not unfit for habitation? *or*
- (b) Will a proportion of the new houses be reserved for families now living in houses unfit for habitation, and which latter can only be effectively dealt with by the removal (temporarily or otherwise) of the tenants?

The adoption of the first-named policy is not to be recommended and cannot be carried out by a local authority without ignoring its obligations as regards the unfit houses. The unfit houses will certainly be much cheaper than the new houses, and for this reason the tenants of the former may not be clamouring for other accommodation because of the financial disparity, *but local authorities should consider whether the public health interests are best served by removal of tenants from unfit houses and securing the improvement or demolition of such houses, or, alternatively, giving preference to the more vociferous demands of others requiring accommodation, but who, apart from some degree of overcrowding, are not living under conditions of insanitation.*

If the insanitary conditions under which a large number of people are admittedly living at the present moment are to be ignored until the whole of the new housing programme has been completed, then the serious delay which will inevitably result cannot be otherwise than inimical to the public health, and, with a view to alleviating this in some degree, the following suggestion is submitted for consideration :—

Strenuous attempts should be made to prevent property, which is capable of repair, from falling into such a state that demolition is necessary, and in any new building programme it would be advisable to keep this in mind, and it would be well for local district councils to insist upon a careful house-to-house inspection of all the property in the area, and to select a given number of houses which are capable of being put into good repair. (This is an obligation which exists under the Housing Regulations of 1910.)

Assuming that after inspection a local authority finds that there are 100 houses in its area which can be reasonably repaired or would otherwise fall into desuetude, it would be an economical proposition that the local authority should use its powers and compel the owners of such property to put it in all respects reasonably fit for habitation. For that purpose it might be necessary to temporarily displace the tenants. The repair of one quarter of these houses might be undertaken at one time, and assuming that a local council has a building scheme of say 100 houses, 25 of these houses might be ear-marked for the accommodation of the displaced tenants, and thus the whole of the insanitary property could be repaired seriatim. It is essential that local councils should formulate a definite housing policy.

It is advisable to draw attention to one very important matter connected with the housing problem in this county which is likely to have a very practical bearing on the policy of the various sanitary authorities, especially in those districts where the free house system obtains. In selecting tenants for the new houses that are being erected, a local authority must of necessity charge rents which are very considerably higher than those obtained in pre-war days. For some considerable time yet tenants will be found without difficulty who are willing to pay these comparatively high rents, thus, a family already paying say 12/- per week as sub-tenants for two unfurnished rooms will, as a matter of convenience and comfort, pay the same rent for a semi-detached cottage of five or six rooms, and so long as this class of tenant is available the demand for the new houses will continue. Once this congestion and



overcrowding is relieved and these families accommodated in houses of their own, it follows that the houses built in the later stages of a council's programme will become available for tenants who are to be displaced from houses unfit for habitation. In these cases it is possible that the tenants may be paying one-sixth of the rental of the houses which are provided as alternative accommodation and, however insanitary the unfit house may be, it will be preferred because of its low rental to the newer building provided by the council. In those cases where a man has occupied, during the whole of his married life, a house for which he has not paid a direct rental, it will be difficult to convince him that it is to his advantage to pay 12/- per week. This is likely to prove a very real difficulty in the future, and unless the various local authorities adopt a determined and well-considered general policy in regard to it, the amelioration of existing housing conditions will not be fully achieved. It must not be forgotten that, with very few exceptions, the local authorities in this county have very unwillingly utilized their powers of providing houses for the working classes as, until their hands were forced by the compulsory obligations of the 1919 Act, comparatively little had been done in this direction although the necessity for such action had been urged year after year by the County Medical Officer.

The number of demands which a council receives for accommodation cannot be regarded as an index figure of the needs of the district. This figure can only be obtained by a regular and conscientious house-to-house inspection which should be diligently prosecuted until all overcrowding has been abated and insanitary houses either made fit or demolished. This again emphasizes the urgent need at the present moment for every sanitary authority to consider and adopt a definite housing policy.

SUMMARY OF HOUSING SURVEY RETURNS FROM SANITARY DISTRICTS IN THE ADMINISTRATIVE COUNTY, DECEMBER. 1919.

Sanitary Districts.	Populations.			No. of Houses.		Percentage of overcrowding (2 per room).		Single houses with two or more families.	House unfit for habitation which cannot be made fit.		Houses which are known to be seriously defective.	Insanitary Areas.		Estimate of Local Authority—Number of houses required.	Number of Houses		Agreed Need after revision.
	1911 Census.	1914 Estimate.	1919 Estimate.	Total.	Suitable for Working Classes.	1911.	1919.		No.	Occupants.		No. of houses.	Population.		In Scheme of Local Authority.	Estimated No. which will be built by private enterprise.	
1—Berwick-on-Tweed, Borough of	13,075	13,075	11,800	3,087	140	35·6	22·0	28	...	...	...	2,092	7,782	1,561	1,561	...	1,561
2—Morpeth	7,433	7,656	7,750	1,674	1,358	32·9	22·8	55	34	177	38	90	393	339	72	...	339
3—Wallsend	41,461	44,570	44,064	8,646	8,399	32·0	33·0	1,159	36	178	310	450	1,997	1,955	1,000	...	2,500
4—Alnwick Urban District	7,041	7,000	7,000	1,670	1,442	30·1	29·0	200	40	200	32	(at least) 64	(about) 300	150	118	...	150
5—Amble	4,881	4,881	4,416	1,051	1,050	32·6	26·1	16	...	...	...	...	...	...	...	...	50
6—Ashington	24,583	30,000	32,000	5,411	5,371	32·2	19·6	942	...	...	...	...	...	900	700	200	2,000
7—Bedlingtonshire	25,440	26,500	27,800	5,650	5,550	39·1	18·4	314	235	1,222	359	nil.	...	600	600	...	1,300
8—Blyth	*28,280	31,232	32,857	6,628	6,004	32·0	7·9	300	not stated.	...	not stated.	1,660	7,480	2,000	2,000	...	2,000
9—Cramlington	*6,376	8,250	8,000	1,797	1,752	29·3	13·9	79	60	259	307	...	...	500	500	...	500
10—Earsdon	10,568	11,000	11,250	2,184	2,088	32·4	6·9	110	210	1,043	350	210	1,043	510	510	...	717
11—Gosforth	15,490	16,000	17,000	3,487	1,710	12·4	...	157	...	...	...	...	...	514	514	...	514
12—Hexham	8,417	8,500	7,397	1,685	1,082	21·6	23·6	48	...	...	25	281	1,800	225	50	...	350
13—Longbenton	12,443	12,710	13,290	2,897	2,272	...	...	182	3	15	120	...	...	323	400	...	400
14—Newbiggin-by-Sea Urban District	3,466	5,700	6,000	1,175	978	24·9	14·3	130	22	94	110	...	...	290	200	100	300
15—Newburn Urban District	17,155	18,550	21,000	3,632	3,564	34·2	30·4	414	262	1,158	322	326	1,878	1,192	1,000	...	2,005
16—Prudhoe	8,212	8,450	8,524	1,719	1,670	43·3	41·7	100	8	24	325	8	24	353	180	...	500
17—Rothbury	1,147	1,147	1,200	280	130	13·7	...	nil.	...	...	...	...	...	...	...	...	...
18—Seaton Delaval	7,174	8,100	7,095	1,600	1,000	...	22·8	75	not stated.	...	not stated.	...	...	498	150	141	350
19—Seghill	2,049	2,049	1,942	407	388	46·1	32·5	nil.	nil.	...	322	...	...	40	40	...	40
20—Weetslade	6,700	6,876	6,886	1,489	1,453	33·5	26·1	125	76	308	100	...	...	300	250	...	650
21—Whitley and Monkseaton Urban District	*14,407	16,000	18,500	4,225	1,880	3·4	2·5	213	24	138	...	{ 214 Bungalows.	860	424	182	...	424
22—Alnwick Rural District	12,159	12,159	12,000	2,790	2,444	30·0	30·0	nil.	nil.	...	...	...	...	318	218	100	250
23—Belford	5,006	4,941	4,200	1,246	1,032	31·3	36·3	nil.	8	25	73	...	...	39	39	...	50
24—Bellingham	5,749	5,750	5,750	1,340	1,200	20·0	...	"a few,"	?	?	...	...	...	130	130	...	90
25—Castle Ward	11,921	12,633	11,234	2,379	(est.) 2,000	25·3	...	30	nil.	...	12	14	60	224	224	...	300
26—Glendale	8,579	8,579	8,379	1,990	1,500	27·2	...	3	15	60	200	...	...	20	20	...	130
27—Haltwhistle	8,545	8,600	9,125	1,954	1,884	14·8	4·8	46	52	274	91	...	...	1,014	250	?	1,014
28—Hexham	21,887	22,293	20,613	5,256	3,182	18·0	9·0	27	3	10	14	...	...	163	158	5	220
29—Morpeth	17,308	18,250	17,238	3,435	2,914	31·6	...	25	40	208	36	...	...	554	554	...	717
30—Norham and Islandshires Rural District	5,830	5,830	5,656	1,300	1,130	34·1	...	nil.	200	700	90	...	...	450	150	50	450
31—Rothbury Rural District	4,606	4,606	4,400	1,041	950	19·8	nil.	nil.	nil.	...	9	...	...	...	...	...	...
Administrative County Totals	*367,388	391,887	394,366	83,125	67,567			4,778	1,328	6,093	3,245	5,409	23,617	15,586	11,770	596	19,871

\* Alterations in Area since 1911, representing a total additional population in these districts of 4,086.







## REFUSE REMOVAL AND DISPOSAL.

The arrangements for the carrying out of this important branch of sanitary administration vary considerably in the different sanitary districts of the county. Experience, however, has proved that the only satisfactory method of dealing with the work involved is for each local authority—with the exception of scattered rural districts—to utilize its enabling powers under Section 42 of the Public Health Act, 1875, to inaugurate an efficient system for the council's area, and for this system to be carried out by direct labour under the control of the council's officials. It is therefore a matter for congratulation that scavenging systems by direct labour are gradually being extended, and several authorities which in the past have let this important work to contractors are now carrying out the work themselves with beneficial results.

In eleven of the twenty-one boroughs and urban districts in the county the work of refuse removal is wholly, and in three others partly, carried out by direct labour employed by the respective local authorities, these areas representing roughly over two-thirds of the urban population of the administrative county. In the remaining urban areas, with the exception of Rothbury, the work is let to contractors, and in nearly all these instances the change to direct labour scavenging is either contemplated or the officials have adversely reported against the continuance of the contract system.

That the contract system is rarely, if ever, a satisfactory one is not surprising when it is considered that under this system the most elementary, though undoubtedly the most important, duty of a sanitary authority is handed over to private persons whose sole interest is a financial and not a public health one, and at the same time the public health officials of the district have no direct control over the persons employed by such contractors who are engaged in carrying out important public health work. Certainly some control can be exercised by carefully drawn up conditions, stipulations being inserted in the contracts, but the method of securing an efficient service in the case of neglectful contractors is so slow and unsatisfactory that the public health needs of the district are seriously prejudiced and much of the health official's time is taken up and needlessly wasted in supervising the work of the contractors and dealing with the all too frequent delinquencies of their employees.

It is sincerely to be hoped that, on the grounds of sanitary efficiency alone, the councils in whose areas the contract system is still in vogue, will take an early opportunity of considering the question of discarding this system and substituting schemes of refuse removal by their own employees and supervised directly by their own officials.

The frequency of removal also differs in the various districts and according to the varying types of receptacles in use. The refuse from privy middens is generally removed monthly, from ash closets weekly, and from pail closets weekly in some districts and bi-weekly in others. In rural districts where there are no public scavenging systems the periods of removal are frequently much too long and a period of six months is by no means unusual even for privy middens used by several families.

The methods of disposal are by no means ideal as there is not a single forced-draught refuse destructor in the whole of the administrative county. At Ashington and Gosforth the urban councils are considering the advisability of installing pulverisers, but no definite steps have as yet been taken towards the establishment of this comparatively new method of dealing with house refuse. At Wallsend, where the appointment of a whole-time scavenging superintendent is contemplated, a proportion of the refuse is barged to sea and a natural-draught furnace provided for the destruction of paper, shop refuse and

other such easily combustible matter as is collected. By far the greater proportion of refuse collected by the sanitary authorities of the county is disposed of (1) by supplying to farmers and market gardens for agricultural purposes and (2) by tipping into disused quarries or filling in low-lying land, etc. The former method is frequently attended by grave public health risks, especially because of the possibility of pollution of sources of water supply, whilst the irregular demand, by agriculturalists, for this material at certain times of the year is a further unsatisfactory feature connected with this method of disposal. As regards disposal by tipping, the success of this method depends almost entirely on the suitability of the site of the tips selected and the precautions taken with a view to preventing the dissemination, during windy weather, of the lighter materials such as rags, paper, etc., which are deposited. Frequent complaints have been received by the county council as to nuisances arising owing to neglect of the above precautions and local authorities should give the points very careful consideration when this method of disposal is in use and when new sites for tips are in contemplation.

Another feature in connection with this work and which should receive the early and earnest consideration of local authorities is the removal of house refuse in ordinary carts from which it is almost impossible to prevent spilling the contents; rarely are such vehicles provided with any form of cover. In several instances councils do not carry out the provisions of their own byelaws relating to removal of refuse as regards these particulars.

In rural districts the conditions are frequently so unsatisfactory as to constitute a grave reflection on the sanitary authorities, particularly in the case of the larger villages for which no public system of scavenging has been provided. The absence of such provision results in ever-recurring nuisances owing to the depositing of refuse by occupiers of premises in most unsuitable situations, frequently by the side of public roads and footpaths and into watercourses, while the time of the council's officials in trying to prevent or secure an abatement of such nuisances is largely wasted in dealing with a situation which can only be satisfactorily met by the adoption of a public system of scavenging. As an example of these conditions the Hexham rural district may fittingly be quoted, as in this extensive area the local authority have not installed a single system of public scavenging although the district contains several large villages used as health resorts and as suburban residences. During the year under review the two sanitary inspectors of this district served 478 notices relating to various conditions of insanitation and, of these, 338 notices or 71 per cent. related to the disposal of refuse.

In the following rural districts scavenging areas have been formed and for the parishes named:—Alnwick—Alnmouth and Togston; Belford—for Belford Village, North Sunderland and Seahouses; Glendale—for Wooler, Lowick and Wark; Haltwhistle—for the town area; and Morpeth—for Widdrington and West Chevington.

The attention of the rural district councils of Bellingham, Hexham, Alnwick and Norham and Islandshires is particularly drawn to this matter in the hope that public scavenging systems will be inaugurated for all the larger villages; unless this is done it is most desirable that the compulsory powers of the Ministry of Health under Section 42 of the Public Health Act, 1875, should be utilized.

In districts where the population is so scattered as to make such systems impracticable, local authorities should adopt byelaws providing for the regular cleansing of privies, ashpits, etc., by the occupiers at definite fixed periods, thus affording the health officials a much more ready means of dealing with overflowing receptacles than by utilizing the protracted formalities which are necessary when such matters have to be dealt with in the ordinary course as nuisances.



## RIVERS POLLUTION PREVENTION ACTS.

The administrative work under the above Acts, compared with that carried out under pre-war conditions, was very considerably modified owing to the following considerations:—(1) the urgent necessity of concentrating attention on more pressing problems, such as housing; (2) the impossibility of carrying out any comprehensive schemes of sewerage and sewage disposal owing to the shortage of labour and materials which existed during the year under review, and (3) the futility of making further systematic inspections when such a long list (the outcome of previous inspections) of serious pollutions was still awaiting the adoption of remedial measures with little hope of these being carried out for some appreciable time.

For these reasons no formal reports were presented to the county council as in former years and the administrative work consisted of inspection of existing sewage disposal works as time and opportunity offered, and dealing informally with such conditions as were found to be unsatisfactory.

Generally speaking, the condition of many of the existing sewage disposal works is far below the standard maintained and insisted on in pre-war days, while in some cases the works were found to be in such a condition of neglect, which had been progressively apparent during the war, that gross pollution of streams resulted.

Now that the labour difficulty has practically disappeared, local authorities should be able to maintain the proper management and supervision of these works which is so essential to their successful working and without which the most expensive and most carefully designed schemes will be unsatisfactory.

There are many instances of gross pollution of streams in the county for the remedying of which schemes had been prepared and the necessary preliminaries undertaken when the restrictions of war compelled their suspension. These schemes should now be again considered and, if necessary, revised with a view to their early completion. The following which fall under this category may be enumerated:—

*Ashington Urban.*—Sewerage and sewage disposal scheme for the Ashington Ward, including provision for remedying the pollution of the Haydon Letch and River Lyne.

*Bedlingtonshire Urban.*—Scheme of sewerage with a view to obviating pollution of the Sleek Burn, New Letch and Willow Burn.

*Cramlington Urban.*—Pollution of Horton Burn and River Blyth; the Shankhouse and East Hartford sewerage and sewage disposal scheme, regarding which a Local Government Board inquiry was held in 1914; although the scheme was sanctioned in 1915 the necessary loan was withheld.

*Seaton Delaval Urban.*—Sewerage scheme to provide for remedying the existing pollution of Meggie's Burn, and arrangements with the neighbouring authority for dealing with the sewage from the outlying part of the council's district at Shankhouse.

*Weetslade Urban.*—The provision of a scheme of sewerage and sewage disposal for Seaton Burn, Dudley and Annitsford so as to effectually deal with the pollution of the Seaton Burn, which has been the subject of numerous complaints by the county council in the past.

*Alnwick Rural.*—The conditions at Togston, Rennington, Christon Bank, Shilbottle and Glanton require early consideration with a view to the adoption of ameliorative measures.



TABLE OF VITAL STATISTICS, &amp;c., 1919.





*Belford Rural.*—The conditions at Belford Village as regards both sewerage and sewage disposal are such that no further time should be allowed to pass before an efficient and sufficient scheme is proceeded with. The disposal of sewage at Chathill is likewise in need of early attention.

*Bellingham Rural.*—Schemes of sewerage and sewage disposal at Greenhaugh, Lanehead, East Woodburn, Falstone, Otterburn and Plashetts were long overdue and should be proceeded with without further delay.

*Castle Ward Rural.*—Untreated sewage from the villages of Whalton and Stamfordham is still being discharged into the How Burn and River Pont and schemes for avoiding this are required.

*Haltwhistle Rural.*—Probably the worst instance in the county of the pollution of a stream by sewage is that from Haltwhistle town, and although an application for loan was made and a Local Government Board inquiry held in 1914, the conditions complained of on many occasions still continue. Schemes of sewerage and sewage disposal were also urgently needed for Bardon Mill, Tow House, Redburn, Coanwood and Harper Town.

*Hexham Rural.*—The completion of the Broomhaugh and Riding Mill scheme which was nearing accomplishment in 1916, when work was suspended, and the early commencement of suitable schemes of sewerage and sewage disposal at Wylam (North and South), Corbridge, Acomb, Haydon Bridge, Allendale and Catton are urgently necessary, these flagrant instances of river pollution having been reported and "considered" *ad nauseam*, and the time for effective action is long overdue. Other instances of river pollution at Hagg Bank, Ovington, Dilston, Warden, Simonburn, Humshaugh, Hardhaugh, Fourstones, Newbrough, etc., by crude sewage from the local authority's sewers are also a grave reflection on the rural district council as regards its obligations under the Rivers Pollution Acts.

*Morpeth Rural.*—The carrying out of the much needed sewerage scheme for the eastern portion of this district, which was "indefinitely postponed" after a Local Government Board enquiry had been held in 1914, should not be longer delayed as many improvements, other than those relating to river pollution, are being held up by the absence of such provision as the scheme would afford.

*Norham and Islandshires.*—The council's obligations regarding the disposal of sewage at Norham and Scremerston should now be met, such action being long overdue.

The carrying out of the necessary works in the above-mentioned cases, in view of the greatly enhanced cost of both materials and labour, will impose considerable financial burdens on the ratepayers of the districts concerned, but it must not be forgotten that this largely enhanced cost represents in some respects a penalty for the procrastination of local authorities who in the past have failed to meet their obligations in these matters and to carry out schemes when the cost was about one-third of what it is to-day and when money could be borrowed at nearly half the rate at which it is now procurable.

#### NOTIFICATION OF BIRTHS ACTS AND THE MATERNITY AND CHILD WELFARE ACT, 1918.

The county council administered the above Acts, under the authority or the Orders of the Local Government Board of August 11th, 1916, and June 22nd, 1917, in the administrative county excepting the borough of Wallsend and the urban districts of Ashington, Bedlingtonshire, Blyth, Gosforth, Hexham, Longbenton and Newburn.

A reorganisation of the health visiting staff was effected under which the work of the ten health visitors previously occupied exclusively with work under the above Acts was co-ordinated with the work of the six school nurses; six additional health visitors were appointed, bringing the total number engaged up to 22, each of whom was allocated to a particular district in the administrative county and undertook, speaking generally, work in connection with maternity and child welfare, as well as work under the school medical service. No county council health visitor was, however, allocated to the borough of Wallsend or the urban district of Blyth, as in these areas the district council was autonomous as regards the administration of the above Acts and of the Education Act, 1902. Similarly, in the borough of Berwick-on-Tweed only maternity and child welfare work was undertaken by the county council's health visitor and only work under the school medical service in the urban districts of Ashington, Bedlingtonshire, Gosforth, Hexham, Longbenton and Newburn.

The council's health visitors paid the following visits during the year in connection with maternity and child welfare:—Pre-natal visits 592; to infants under 1 year—first visits 4,578, total visits 18,441; to children 1-5 years—total visits 18,824.

The following Infant Welfare Centres were open during the year in the area for which the county council administers the above Acts:—

Place.	Whether sessions held weekly, fortnightly, etc.	Day and hour of meeting.	Arrangements for medical supervision.	Average attendance per session.	
				Expectant mothers.	Children
Berwick	... Weekly	Thursday 2 p.m.	M.O.H. occasionally	—	28
Alnwick	... Do.	Monday 2 p.m.	M.O.H. Alnwick U.D. occasionally	—	40
Morpeth	... Do.	Do.	Dr. M. East weekly	2	10
Seaton Delaval	Do.	Thursday 2 p.m.	Dr. J. Anderson fortnightly	3	25
Stocksfield	... Do.	Monday & Wednesday alternately 2 p.m.	Dr. Mary Raw fortnightly	2	6
Whitley Bay...	Do.	Monday 2.30 p.m.	Dr. Patterson	26	51

The above centres are not under the control of the county council.

The following visits were paid by the eleven health visitors employed by the eight district councils who administered the above Acts in their respective areas:—To expectant mothers 598; to infants under 1 year—first visits 4,331, total visits 19,498; to children 1 to 5 years 5,711. The following Infant Welfare Centres were open in the districts alluded to:—

Place.	Whether sessions held weekly, fortnightly, etc.	Day and hour of meeting.	Arrangements for medical supervision.	Average attendance per session.	
				Expectant mothers.	Children.
Ashington	... Weekly	Monday 2 p.m.	Attended by M.O.H.	—	47
Bedlingtonshire—					
1. Bedlington	Monthly	Last Tuesday 2 p.m.	M.O.H. periodically	2	33
2. Guide Post	Fort-nightly	Monday 2 p.m.	Do.	3	38



Place.	Whether sessions held weekly, fortnightly, etc.	Day and hour of meeting.	Arrangements for medical supervision.	Average attendance. per session.	
				Expectant mothers.	Children.
3. Sleekburn	Monthly	First Monday 2.30 p.m.	Do.	2	40
4. Stakeford	Do.	First Wednesday 2 p.m.	Do.	1	30
5. Cambois	Do.	Second Monday 2 p.m.	Do.	1	28
Gosforth	... Weekly	Tuesday & Thursday 2 p.m.	Dr. Helen Gurney	—	32
Hexham	... Do.	Wednesday 3 p.m.	M.O.H. fortnightly	20	24
Longbenton	... Fort-nightly	Wednesday 2.30 p.m.	Do.	—	10
Newburn— Westerhope...	Weekly	Monday 2 p.m.	M.O.H. occasionally	3	6
Lemington	... Do.	Wednesday 2 p.m.	Do.	6	35
Throckley	... Do.	Thursday 2 p.m.	Do.	4	15
Wallsend— Vine Street	Do.	Wednesday 2 p.m.	M.O.H.	—	58
Willington Quay	Do.	Tuesday 2 p.m.	Do.	—	27

## MIDWIVES ACTS.

The duties of the Local Supervising Authority for the administrative county, under the Midwives Acts 1902, were exercised by the Maternity and Child Welfare and Midwives Committee under powers delegated by the county council. During the year ended March 31st, 1920, 122 trained and 10 untrained (but certified) midwives gave notice of intention to practise in the county.

The 3,030 confinements actually undertaken by midwives (2,604 by trained and 426 by untrained) constituted 31.1 per cent. of births registered in the administrative county.

No case of Puerperal fever and only one case of Ophthalmia Neonatorum was reported in the practice of midwives. Two deaths of infants occurred (both in the practice of untrained midwives) before a medical practitioner was in attendance. It was not necessary to report any midwife to the Central Midwives Board for any breach of the Board's Rules.

Grants were made by the county council during 1919 to the County Nursing Association (in respect of the provision of additional midwives) for allocation to the following district associations, a similar sum being contributed in each case by the County Nursing Association: *first year grants*—Whitley Bay £25; Amble £25; *second year grants*—Bedlington £12 10s.; North Seaton £12 10s.; Ingram and Alnham £12 10s.; Edlingham and Belton £12 10s.; Haltwhistle £12 10s. and Willington £12 10s.



## PUBLIC HEALTH (VENEREAL DISEASES) REGULATIONS, 1916.

The arrangement with the Council of the Durham University College of Medicine for bacteriological examinations was continued during the year. The specimens examined from patients in the administrative county numbered 1,090 (1,021 Wassermann tests and 69 microscopic examinations).

The treatment of patients from the administrative county suffering from venereal disease was continued at the clinic at the Royal Victoria Infirmary, Newcastle-on-Tyne. The following is a summary of the return made by the Medical Officer of this Treatment Centre :—

	Northumberland (Administrative County).		
	Males.	Females.	Total.
1. Number under treatment or observation on January 1, 1919	173	87	260
2. Dealt with for the first time ... ..	453	129	582
3. Ceasing to attend—			
(a) Before completion of a course of treatment	222	98	320
(b) After completion of a course of treatment but before final tests as to cure	—	—	—
4. Transferred to other treatment centres	8	2	10
5. Discharged after completion of cure and observation	70	6	76
6. Under treatment or observation, Jan. 1, 1920	326	110	436
7. Total attendance at outdoor patients' clinic	3,581	1,350	4,931
In-patients—			
8. Aggregate number of in-patients' days of treatment	341	385	726

During the preceding year (1918) 319 new patients were treated at the clinic and the attendances of outpatients numbered 3,067.

APPENDIX.

REPORT OF THE COUNTY TUBERCULOSIS OFFICER.

Table showing cases treated during 1919.

Class of Applicant.	Sex.	Number of Applicants.	No treatment offered.	Refused treatment.	Died before admission to Sanatoria.	Left district before admission to Sanatoria.	Domiciliary.	Dispensary.	Sanatorium Treatment.						
									Number.	Much improved.	Improved.	Stationary.	Not so well.	Dead.	Still in Sanatoria.
Insured Persons	M.	342	1	26	1	—	33	28	232	35	78	40	11	4	64
	F.	34	—	3	1	—	6	1	22	4	5	5	1	—	7
Dependants over 16 years of age	M.	1	—	—	—	—	—	—	1	—	—	—	—	—	1
	F.	53	5	7	—	—	—	6	33	5	8	6	4	—	10
Dependants under 16 years of age	M.	93	14	6	—	2	—	19	32	3	4	3	—	—	22
	F.	103	15	14	—	—	—	26	25	1	2	2	—	—	20

At the end of the year there were awaiting admission to sanatoria:—Insured—Males, 21. Females, 1.

Dependants (over 16 years of age)—Females, 2; (under 16 years of age)—Males, 20. Females, 23.

3,045 house visits were paid by nurses.

DISPENSARIES.—ATTENDANCES DURING 1919.

	Old Cases.		New Cases.	
	...	...	...	...
Wallsend	...	763	...	262
Hexham	...	85	...	31
Newburn	...	386	...	35
Blyth	...	380	...	105
Ashington	...	1012	...	260
	2626			693

